Gulch, Jon

From: Fusinski, Keith
Sent: Tuesday, September 09, 2014 11:00 PM
To: Gulch, Jon
Subject: RE: SDS and product data

Jon,

Urea breakdown begins as soon as it is applied to the soil. If the soil is totally dry, no reaction happens. But with the enzyme urease (which is commonly found in natural soil bacteria) plus any small amount of soil moisture, urea normally hydrolizes and converts to ammonium and carbon dioxide. This can occur in 2 to 4 days and happens quicker on high pH soils.

I can't find any eco screening levels for urea or nitrogen. However, what I do keep running into is how in a fresh water system, urea is primarily broken decomposed by phytoplankton and is one of the most important nitrogen source for phytoplankton growth.

As you may know phytoplankton is another name for algae, such as the algae bloom which is currently in Lake Erie. Dosing any freshwater system with urea can potentially result in an algal bloom which among other things can result in increase in mycotoxins in drinking water and decreased oxygen in the water which can result in fish kills.

Once again, I have no idea on how much it takes to have these effects (still looking but I don't think anyone knows), but since we already have a problem in the lake, this could potentially feed our current water quality issues.

My suggestion at this point is to have them work as fast as utterly possible to keep as much out of the ditch as they can.
Keith Fusinski, PhD, MT(ASCP)
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U.S. EPA Region V
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734-740-9018-cell

From: Gulch, Jon
Sent: Tuesday, September 9, 2014 10:04 PM
To: Fusinski, Keith
Subject: Fw: SDS and product data

Sent from my Motorola 2900 Bag Phone with color LCD display and leather attaché case.

From: Krause, Kevin <kkrause@CI.ROMULUS.MI.US>
Sent: Tuesday, September 9, 2014 8:56 PM
To: Gulch, Jon
Subject: Fwd: SDS and product data

Please e-mail back confirmation of this msds sheet.

-------- Original message --------
From: Michael Stadler
Date:09/09/2014 8:48 PM (GMT-05:00)
To: kkrause@ci.romulus.mi.us
Subject: Fwd: SDS and product data